

REMARKS

A. Status of the Claims

Claims 1 and 93 were rejected under 35 U.S.C. 112, first paragraph, as allegedly lacking enablement. Claims 11, 17-18, 30-31, 34, 46-47, 54, 74-75 and 100-101 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claims 1, 3-9, 11-52, 54-75, 93-95, and 97-101 were rejected under 35 U.S.C. 103(a) as being unpatentable over Siebenhaar et al. (WO 00/32310) in view of Franczyk et al. (U.S. 5,739,390). Finally, claims 2, 10, 53, 76 and 96 were objected to as being dependent upon a rejected base claim, but were determined by the Office to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

This Amendment B, responding to the Office action dated April 2, 2004 is being filed simultaneously with a request for continued examination (RCE). Claims 32 and 34-36 were amended to require the concentration of non-copper metal to be at least about 65% to more clearly cover a particular embodiment of the invention. Support for the amendment to claims 32 and 34-36 may be found for example at page 15, lines 20-21.

B. Rejection under 35 U.S.C. §103(a)

Reconsideration is respectfully requested of the rejection of claims 1, 3-9, 11-52, 54-75, 93-95, and 97-101 under 35 U.S.C. 103(a).

1. Claims 1, 3-9, 11-18, 20-23, 25-26, 28-47, 49-50, 54-60, 62-63, 65-75, 94-95 and 97-101.

Claims 1, 3-9, 11-18, 20-23, 25-26, 28-47, 49-50, 54-60, 62-63, 65-75, 94-95 and 97-101 are each patentable over the cited art. Significantly, claims 1, 3-9, 11-18, 20-23, 25-26, 28-47, 49-50, 54-60, 62-63, 65-75, 94-95 and 97-101 are entitled to an effective filing date of April 11, 2000. The primary reference relied upon by the Office, Siebenhaar et al. (WO 00/32310) is a PCT publication of an International application filed prior to November 29, 2000 and did not publish until after April 11, 2000.

Accordingly, Siebenhaar et al. is not prior art under 35 U.S.C. 102 and as such cannot be relied upon to support a rejection under 35 U.S.C. 103. Thus, the rejection of claims 1, 3-9, 11-18, 20-23, 25-26, 28-47, 49-50, 54-60, 62-63, 65-75, 94-95 and 97-101 is improper and should be withdrawn.

2. Claims 19, 24, 27, 52, 61, 64 and 93

Claims 19, 24, 27, 52, 61, 64 and 93 are submitted as patentable over Siebenhaar et al., International Publication WO 00/32310, in view of Franczyk et al., U.S. Patent No. 5,739,390, for the reasons stated in Amendment A, submitted on August 11, 2003 and for the reasons set forth below.

Claims 19, 52 and 93 are each directed to processes for dehydrogenating primary alcohols with copper containing catalysts. Each claim requires, among other things, that the copper containing catalyst comprise a **metal sponge support having from about 2% to about 30% by weight copper**. As stated in our previous response, None of the cited references disclose or suggest any process using a dehydrogenation catalyst having a **metal sponge support having from about 2% to about 30% by weight copper**.

The Office argues that Siebenhaar et al. discloses carrying out a dehydrogenation process in the presence of a modified Raney copper catalyst in a quantity of 0.1 to 30% by weight. However, Siebenhaar et al. are referring to the concentration of catalyst in the reaction mixture; not that amount of copper in the catalyst itself. That is, the amount of copper catalyst **relative to the primary alcohol** is in a quantity of 0.1 to 30% by weight. Similarly, the Office points out that Franczyk et al., describe a process for carrying preparing amino carboxylic salts using a copper catalyst containing alkali-resistant carriers (18 wt% copper and 82 wt% zirconium oxide). However, the copper catalyst containing alkali-resistant carriers described by Franczyk et al., does not include any metal sponge support and certainly does not include any metal sponge support having from about 2% to about 30% by weight copper. Simply put, the cited references, whether considered alone or in any combination, do not describe or suggest any process using a copper containing catalyst

which comprises a metal sponge support having from about 2% to about 30% by weight copper. Accordingly, claims 19, 52 and 93 are submitted as patentable over Siebenhaar et al., International Publication WO 00/32310, in view of Franczyk et al., U.S. Patent No. 5,739,390.

Claims 24 and 27 each depend directly or indirectly from claim 19 and as such are patentable over the cited art for the same reasons as discussed above with regards to claim 19. Similarly, Claims 61 and 64 each depend directly or indirectly from claim 52 and as such are patentable over the cited art for the same reasons as discussed above with regards to claim 52.

3. **Claim 48**

Claim 48 is directed to the process of claim 2, wherein the hydrogen produced by the dehydrogenation process of claim 2 is collected and transferred to a fuel cell for use in the production of electric power. The Office has made no attempt to establish a *prima facie* case of obviousness with respect to claim 48. The Office does not, because it cannot. None of the cited references describe or suggest any process wherein hydrogen produced by a dehydrogenation process is collected and transferred to a fuel cell for use in the production of power as required by claim 48. In fact, nowhere in any of the cited references are fuel cells even mentioned. Accordingly, since the cited references failed to establish a *prima facie* case of obviousness with respect to claim 48, the rejection is improper and should be withdrawn.

C. Rejection under 35 U.S.C. §112

1. **Claims 1 and 93**

Claims 1 and 93 are rejected under 35 U.S.C. §112, first paragraph for lack of enablement. For the reasons set forth in Amendment A, submitted on August 11, 2003 and for the reasons set forth below, Applicants respectfully traverse the rejection. Reconsideration and withdrawal of the rejection is respectfully requested.

As a matter of Patent Office practice, a specification disclosure which contains a teaching of the manner and process of making and using the invention in terms which correspond to those used in describing and defining the subject matter sought to be patented must be taken as in compliance with the enabling requirement of the first paragraph of §112 unless there is reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support. In re Marzocchi, 439 F.2d 220, 169 USPQ 367, 370 (CCPA 1971); see also MPEP §2164.04. Furthermore, "it is incumbent upon the Patent Office, whenever a rejection on this basis is made, to explain why it doubts the truth or accuracy of any statement made in a supporting disclosure and to back up assertions of its own with acceptable evidence or reasoning which is inconsistent with the contested statement. Id., 169 USPQ at 370. Thus, the burden rests upon the Office to establish a *prima facie* case of nonenablement, which requires the Office to provide acceptable evidence or reasoning inconsistent with the contested statements. Id.; see also In re Strahilevitz, 668 F.3d 1229, 1232 (CCPA 1982). The Office has not met this burden.

On page 4 of the Office action dated April 9, 2003, the Examiner asserts that "there is no certainty that all the salts of carboxylic acids can be equally produced under the claimed reaction conditions and the reaction parameters." Such a conclusive assertion falls far short of acceptable evidence or reasoning to question the applicability of Applicants' process as disclosed and claimed. Nowhere does the Examiner articulate any objective basis upon which one skilled in the art would question the suitability of Applicants' process to produce the wide range of carboxylic acids from primary alcohols as claimed. Nor does the Office action provide any explanation why the reaction parameters disclosed by Applicants would not produce carboxylic acid salts from primary alcohols as claimed. Furthermore, the Office offers no additional explanation in the present Office Action as such has failed to meet its burden.

Despite the failure of the Office to meet its burden, Applicants nevertheless submit that the specification fully meets the requirements of 35 U.S.C. §112, first paragraph because the combination of specific examples and general teaching of the specification along with knowledge common to those skilled in the art would fully enable a person of ordinary skill in the art to practice the process as claimed without undue

experimentation. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

2. Claims 11, 17-18, 30-31, 34, 46-47, 54, 74-75 and 100-101

Claims 11, 17-18, 30-31, 34, 46-47, 54, 74-75 and 100-101 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. For the reasons set forth below, Applicants respectfully traverse the rejection. Reconsideration and withdrawal of the rejection is respectfully requested.

It is alleged that claims that the phrases "or a salt thereof" and "combinations thereof" are vague and indefinite. To the extent the rejection is based upon undue breadth, rejections of this type have been criticized by the Court of Appeals for the Federal Circuit. Rejections based upon undue breadth, *per se*, are not permissible. See, e.g., U.S. Steel v. Phillips Petroleum, 9 USPQ2d 1461, 1464 (Fed. Cir. 1989).

To the extent the rejection is based upon a lack of definiteness of the terminology, it has long been established that to determine whether claim language is definite, the claims must be examined to see whether the metes and bounds of the invention can adequately be determined from the claim language; stated another way, would a person of ordinary skill have any difficulty in ascertaining whether a particular combination falls within or outside the claimed combination. In re Goffe, 526 F.2d 1393, 1397-1398 (CCPA 1975).

In this case there is nothing indefinite about the terms "or a salt thereof" or "combinations thereof." Without question, a person of ordinary skill working in the field is able to discern whether a composition is or is not a salt of any of the compositions preceding the phrase; the fact that the claims do not restrict the composition to any particular salts does not render this term vague or indefinite. Similarly, it is without doubt that a person of ordinary skill would understand "combinations thereof" to be nothing more than the various combinations of the compositions listed in the corresponding claims. Thus, there is nothing vague or indefinite about either the phrase "or salts thereof" or "combination thereof."

D. The Objection of claims 2, 10, 53, 76 and 96

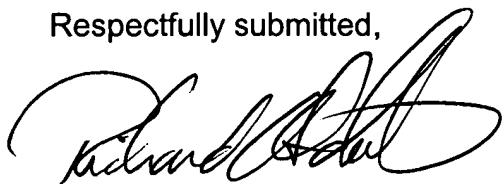
Claims 2, 10, 53, 76 and 96 were objected to as being dependent upon a rejected base claim. Applicants respectfully submit that the base claims from which claims 2, 10, 53, 76 and 96 are patentable for the reasons stated above and as such, the objection of claims 2, 10, 53, 76 and 96 should be withdrawn.

CONCLUSION

Favorable reconsideration and allowance of all pending claims are respectfully solicited.

Applicants request an extension of time to and including September 2, 2004 for filing a response to the above-mentioned Office action. A check in payment of the applicable extension fee is enclosed. The Commissioner is requested to charge any fee deficiency or overpayment in connection with this amendment to Deposit Account 19-1345.

Respectfully submitted,



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Enclosures